

## COVER PAGE

<b>Project Title:</b> Initiatives to Grow New Innovate Talent to Enable Fusion Energy (IGNITE Fusion Energy)	
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## ACCOMPLISHMENTS

- What are the major goals and objectives of this project?
  1. We will establish a student mentoring program to involve undergraduate and graduate (primarily Master's level) students in consecutive summer internships at ORNL and a private fusion company, where they will gain hands-on experience with cutting-edge research and commercial applications of fusion technology. Students will also benefit from continued mentorship in the form of career guidance and professional development during academic semesters.
  2. We will collectively develop a series of new courses and special-topics modules to be implemented at participating universities, which will be shared with the broader academic community. This curriculum development effort will be based on the needs identified by private fusion companies and national lab leaders, integrating fundamental principles and advancements in fusion engineering and technology into existing curriculum.
  3. In order to promote the sustainability of the project efforts, we will create an inaugural entrepreneurship and innovation focused bootcamp – the Fusion Innovation Bootcamp – designed for sustained training and participation of students in fusion engineering. Student trainees will engage with fusion startup professionals, national lab researchers, and university faculties in a dynamic curriculum featuring lectures, panels, hands-on sessions, and pitch presentations.
- What was accomplished towards these goals?
  - Describe progress toward completion of major activities or significant objectives identified in your proposal and include significant results, key outcomes, and other achievements.
  - - The first technical course modules have been developed among the collaborators on this project.
    - The first co-hort of Oak Ridge National Laboratories (ORNL) summer interns have successfully completed a summer of research with their mentors.
    - The planning of the first Fusion Innovation Bootcamp (FIB) is underway.
- What do you plan to do during the next reporting period to accomplish the goals and objectives?
  - Complete the second summer of ORNL internships.
  - Complete the first FIB.
  - Engage with industry partners to begin internships with private companies.
  - Begin teaching fusion technology course modules at collaborating institutions.
  - Develop additional fusion technology course modules.
- What opportunities for training and professional development were provided for participants?
  - This award has enormous impact on training and professional development by providing undergraduate students with summer research internships at ORNL, connecting them with industry partner for internships, providing course modules on fusion technology, and allowing them to interact with other students in the field and scientists at the Fusion Summer School and FIB.
- How have the results been disseminated to communities of interest? In particular, provide details for any dissemination not reported in the research product section of this report.
  - Collaborators on this project have provided seminars and presentations at multiple universities across the state of Tennessee. The undergraduate student interns each present on their research accomplishments at the end of their summer internships at ORNL to scientists from across the laboratory.

## PRODUCTS

The products shown below include only Publications with a 'Published' status and Intellectual Properties with a 'Granted' status. Products with other statuses are not included in this report. The Revision Type indicates whether a product is New (newly added), Updated (existing product modified), or No Change (existing product reported without modifications) during the current budget period. Note that 'Updated' statuses may appear more frequently as products progress through the publishing process. All products listed have been reported for the current project period of this award.

### PUBLICATIONS

There are no publications to report.

### INTELLECTUAL PROPERTIES

There are no intellectual properties to report.

## PARTICIPANTS AND OTHER COLLABORATING ORGANIZATIONS

The table below only contains participants who have identified an affiliation with the Awardee Institution. Participants from any associated subawards may not be included in this count.

### PARTICIPANTS DETAIL

Project Role	Number of People	Total Person Months Worked
Co-Investigator	1	1
Graduate Student (Research Assistant)	1	3
<b>Total Responses</b>	<b>2</b>	<b>4</b>

### PARTNERS DETAIL

There are no partners to report.

## IMPACT

- What was the impact on the development of the principal discipline(s) of the project?
  - This award provided summer research internships in fusion technology to 6 undergraduate students and greatly contributed to their professional development. Coursework has been developed as part of this award that will introduce fusion technology to students at multiple institutions across Tennessee and expand the potential workforce development pipeline for our industry.
- What was the impact on physical, institutional, and information resources that form infrastructure?
  - This award has developed course work that is now available to faculty at multiple universities across Tennessee and will expand the opportunities for students to learn about and pursue a career in fusion technology and related fields.
- What was the impact on society beyond science and technology?
  - Fusion technology has an enormous potential to impact all of society by unleashing a new power source that can fuel our nation for centuries to come. This award supports the education and training of students across Tennessee that have the potential to increase the size of our trained workforce and accelerate the timeline for harnessing fusion energy.
- What was the impact on the development of human resources?
  - This award provided summer internships for 6 undergraduate students at ORNL, providing them with access to world-leading technology and renowned expertise. This offered significant opportunities for educational and professional development that will advance their career goals. The course modules developed by this work will help to educated students across Tennessee and expose them to the field of Fusion Science and Technology to increase their awareness of this work and offer them the chance to participate in the field.